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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,213	09/12/2003	William R. Houde-Walter	28303.000022	9119

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EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/662,213		HOUDE-WALTER, WILLIAM R.	
	Examiner		Art Unit	
		Stephen M. Johnson	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) 9, 13, 15, 17 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 12, 14, 16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-10 and 12-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election with traverse of species B (illustrated in fig. 2) in the reply filed on 6/20/2005 is acknowledged. The traversal is on the several grounds. (1) It is argued that the illumination beam is required to transmit data from the light valve to the diffractive optic. In response, the image generator connected to the light valve is responsible for creating an image on the light valve (see claim 1, section (f) and paragraph [0028] of the application as originally filed). Therefore the head up display could be used absent an illumination beam (laser). Further note that claim 15 lacks an image generator; a feature required of the claim 1 head up display. (2) It is argued that claim 1 is used in cooperative engagement with the firearm. In response, note that what applicant has claimed in claim 1 is "head up display for a firearm". This does not require a firearm but is only an intended usage. Further note, that applicant has claimed "a base for cooperatively engaging the firearm". This claim language requires that a base be present **for cooperatively engaging the firearm**. This is not the same as a base in cooperative engagement with the firearm. Consequently, the head scope has not been claimed in combination with the firearm and this argument is also not convincing.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-8, 10, 12, 14, 16, and 18 read on the elected species and an action on these claims follows. Claims 9, 13, 15, 17, and 19 are withdrawn from consideration as being directed to non-elected species. The claim language directed to a targeting beam (claim 9) is directed to the fig. 3 species. The claim language directed to a night vision system (claim 13) is not included in the species B (fig. 2) embodiment. The claim language directed to a reflective diffractive optic (claims 17, 19) is directed to the fig. 1 and fig. 3 embodiments.

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2. Claims 2, 4-7, 10, 12, 14, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, what structure (in the elected embodiment) is responsible for the claim limitations directed to “the diffractive optic is a hologram having a recorded image of an infinitely spaced focal plane” and how is this achieved? In claim 6, what structure (in the elected embodiment) is responsible for the claimed “the image appears as a reconstructed image at a plane located from adjacent the user to infinity at infinity” and how is this accomplished? In claim 7, the phrase “the coherent illuminating beam source light valve” lacks complete agreement with its antecedent.

Webster’s defines a hologram as “a three-dimensional picture that is made on a photographic film or plate without the use of a camera”. Consequently, it is not understood as to what is meant by the phrases “a hologram mounted relative to the firearm” (claim 10) or “the diffractive optic is a hologram” (see claims 2 and 4) or “the hologram is moveable connected to the firearm” (claim 12).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferrer.

Ferrer discloses a compact head up display comprising:

- | | |
|--|----------------------------------|
| a) a base; | see fig. 1 , col. 2, lines 56-58 |
| b) a diffractive optic; | 30 |
| c) a coherent illuminating source; | 60R, col. 3, lines 30-35 |
| d) a selective power source for illuminating source; | inherent |
| e) a light valve; | 10 |
| f) an image generator; | col. 3, lines 2-3 |
| g) a foldable or tiltable diffractive optic; and | col. 3, lines 17-18 |
| h) the hologram has a recorded medium. | col. 4, lines 49-50 |

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrer in view of Giuffre et al..

Ferrer applies as previously recited. However, undisclosed is a light valve that is an LCD. Giuffre et al. teach a light valve that is an LCD (col. 5, lines 18-19). Applicant is substituting one viewing mechanism for another in an analogous art setting as explicitly encouraged by the secondary reference (see col. 5, lines 18-19 of Giuffre et al.). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Giuffre et al. to the Ferrer head up display and have a head up display with a different type of light valve or viewing mechanism.

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7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrer in view of McPheters.

Ferrer applies as previously recited. However, undisclosed is an illuminating beam source that is a laser. McPheters teaches an illuminating beam source for a hologram that is a laser (col. 4, lines 51-53). Applicant is substituting one source of illumination light for another in an analogous art setting as explicitly encouraged by the secondary reference (see col. 4, lines 51-53 of McPheters). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of McPheters to the Ferrer head up display and have a head up display with a different illuminating light source.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrer in view of Groh or Reed.

Ferrer applies as recited above. However, undisclosed is a laser range finder in combination with viewing optics. Groh (col. 4, lines 32-34) and Reed (col. 4, lines 8-12) each teach a laser range finder in combination with viewing optics. Applicant is selecting a known method for determining distance in this art and putting it to use as it is already commonly known to be used in this art. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of either Groh or Reed and have a head up display that included a laser range finder in combination with the viewing optics.

9. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrer in view of McPheters and Schneider.

Ferrer applies as previously recited. However, undisclosed is an illuminating beam source

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that is a laser. McPheters teaches an illuminating beam source for a hologram that is a laser (col. 4, lines 51-53). Applicant is substituting one source of illumination light for another in an analogous art setting as explicitly encouraged by the secondary reference (see col. 4, lines 51-53 of McPheters).

Also undisclosed is a firearm mounted for use with an associated aircraft. Schneider teaches a firearm mounted for use with an associated aircraft. Ferrer teaches a hologram mounted relative to an aircraft (see col. 1, lines 9-13). Schneider teaches that firearms are a common item mounted on aircrafts and so teaches a hologram mounted related to a firearm via the intermediate teaching of Schneider.

It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of McPheters and Schneider to the Ferrer head up display and have a head up display used in combination with a different type of illuminating light source and with an aircraft having associated mounted firearms.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrer in view of McPheters and Schneider as applied to claims 10 and 12 above, and further in view of Groh or Reed.

Ferrer, McPheters, and Schneider apply as recited above. However, undisclosed is a laser range finder in combination with viewing optics. Groh (col. 4, lines 32-34) and Reed (col. 4, lines 8-12) each teach a laser range finder in combination with viewing optics. Applicant is selecting a known method for determining distance in this art and putting it to use as it is already commonly known to be used in this art. It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of either Groh or Reed to the Ferrer,

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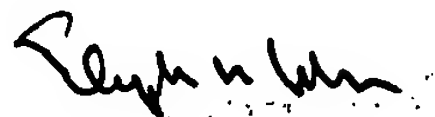
McPheters, and Schneider combination and have a head up display that included a laser range finder in combination with the viewing optics.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877.

The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



STEPHEN M. JOHNSON
PRIMARY EXAMINER

Stephen M. Johnson
Primary Examiner
Art Unit 3641

SMJ

June 29, 2005